(12) UK Patent Application (19) GB (11) 2 368 710 (13) A

(43) Date of A Publication 08.05.2002

- (21) Application No 0120680.4
- (22) Date of Filing 24.08.2001
- (30) Priority Data
 - (31) 0021084

- (32) 25.08.2000 (33) GB
- (71) Applicant(s)

University of Wales (Incorporated in the United Kingdom) BANGOR, Gwynedd, LL57 2DG, United Kingdom

(72) Inventor(s)

Anne Teresa Grace Dugdale Eben Joseph Muse Sean Anthony Murphy Arthur James O'Loan Robert William McIlveen Willis

(74) Agent and/or Address for Service

Mewburn Ellis York House, 23 Kingsway, LONDON, WC2B 6HP, **United Kingdom**

- (51) INT CL7 G09B 7/00
- (52) UK CL (Edition T) **G5G** G17
- (56) Documents Cited

EP 0921481 A1 US 6119153 A

EP 0718783 A1

Field of Search

Online: EPODOC, PAJ, TXTE, WPI.

- (54) Abstract Title Teaching tool comprising disc media and internet link.
- (57) A teaching tool comprises a computer-readable disc containing core data, that can be viewed as a core data display with a plurality of sections, and at least one URL address corresponding to an active server page. Each of said core data display sections has associated with it at least one keyword. The active server page provides communication between the core data display and a links web-page. The teaching tool further includes a database in communication with the active server page, which contains a plurality of peripheral data URL addresses. Each peripheral data URL address has associated with it at least one keyword, wherein, on activating one of the core data display sections, a user is directed, by the active server page to the links web-page, which displays links data related to those peripheral data URL addresses that are associated with the keyword corresponding to the keyword associated with the activated core data display section. The core data can be data relating to any subject-matter but preferably, is data which will not be subject to short-term change, e.g. established scientific theories or historical data. In this way, the teaching tool will remain useful for an increased length of time as the computer-readable disc will not contain any data that is likely to become out dated. Therefore, it will not be necessary for an academic centre to reissue discs or have new discs recorded regularly.

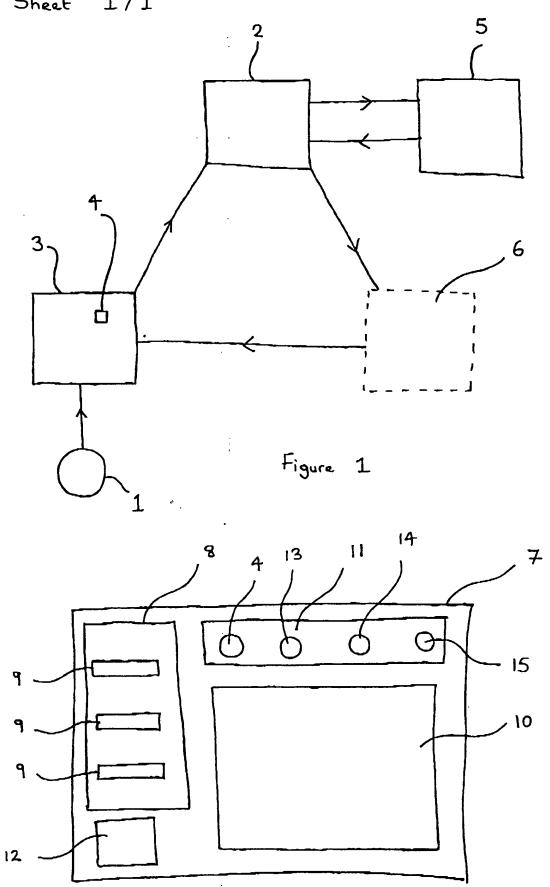


Figure 2

TEACHING TOOL

This invention relates to a teaching tool. In particular, this invention relates to a teaching tool including a CD-ROM and a remote information source, e.g. the Internet.

It is known to provide a teaching tool to allow users to study a topic either at a location away from an academic centre and/or at an academic centre but at hours outside normal teaching hours.

The known teaching tools include a variety of different media. For example, some of the most simple teaching tools are text books and/or paper publications which the user can read at any time and in any location. Other teaching tools include audio and/or video tapes.

With the advent of the computer age, suitably recorded CD-ROMs are used as teaching tools. Furthermore, the Internet has been used to provide a teaching tool.

There are many problems with these known types of teaching tool.

10

15

Firstly, it is desirable for an academic centre to be able to send these teaching tools, preferably by post, to users who wish to study. On occasions, these users may be resident abroad. Paper teaching tools, for example, text books, are bulky and heavy and it will cost a considerable amount to post these items.

A further problem is that the subject matter contained in the teaching tool may become out of date. For example, if the subject matter is Law, the legislation may change and the user would be in possession of incorrect data. In order for the academic centre to update its teaching tool it would be necessary to incur considerable expense in rewriting the documents/textbooks or the CD-ROM or rerecording the audio or video tape.

Use of the Internet overcomes the problems associated with the sending of the teaching tool to the user and the updating of material. However, use of the Internet, i.e. working on-line can be costly for the user if long hours of study are required. Additionally, at certain times during the day when Internet use is high, working on-line can be frustrated by time delays in downloading web pages.

It is known to combine the media of CD-ROM and Internet to provide a teaching tool. The CD-ROM can be provided with URL addresses to appropriate web-pages on the Internet, for example, up-to date legislation.

5

However, these known teaching tools including both a CD-ROM and the Internet have several disadvantages.

Firstly, in order to provide a link between the CD-ROM and the Internet, the known teaching tools have URL addresses recorded on the disc. These addresses are, however, subject to change, for example, URL addresses can become obsolete. Additionally, new web-pages may be created and it would not be possible to add the URL addresses of these new pages to the CD-ROM.

15

20

25

These combined CD-ROM/Internet teaching tools are also unsatisfactory because there is discontinuity between the CD-ROM and the Internet. Often, the web-pages are simply html files which the user will have to scroll through and read and thus these pages are akin to standard text books which are often dull and unreadable.

The present invention aims to ameliorate the above problems by providing a teaching tool that is easy for academic centres to convey to the users, which is easy to

maintain in an up-to-date state and that is appealing to and aids study of the user.

Accordingly, in a first aspect there is provided a teaching tool including a computer-readable disc 5 containing core data that can be viewed as a core data display with a plurality of sections, each of said core data display sections having associated with it at least one keyword, said disc further including at least one URL 10 address corresponding to an active server page, the active server page providing communication between said core data display and a links web-page, said teaching tool further including a database in communication with the active server page, said database containing a plurality of peripheral data URL addresses, each 15 peripheral data URL address having associated with it at least one keyword, wherein, on activating one of said core data display sections, a user is directed, by said active server page to said links web-page, said links 20 web-page displaying links data relating to the peripheral data URL addresses having associated the keyword corresponding to keyword associated with the activated core data display section.

25 In preferred embodiment, said computer-readable disc is a

CD-ROM or DVD. An advantage of using CD-ROMs is that the discs are fairly light and easily packaged and an academic centre can easily post these discs out to users.

5 The core data can be data relating to any subject-matter but preferably, is data which will not be subject to short-term change. For example, the core data could be established scientific theories or historical data. In this way, the teaching tool will remain useful for an increased length of time as the computer-readable disc will not contain any data that is likely to become out-of-date. Therefore, it will not be necessary for an academic centre to reissue discs or have new discs recorded regularly.

15

In order to aid the users' learning, the core data display preferably includes an audio and/or a visual element, perhaps in combination with a text element. For example, the core data display may include an audio/visual introduction perhaps by a well-known academic in the field. Additionally or alternatively, the core data display could include audio/visual presentations of lectures.

25 The core data display is divided into a number of

sections. For example, there may be an introduction section, an information section, and a summary. These sections are preferably further divided into any number of subsections. For example, if the teaching tool is directed towards chemistry, then the information section may be subdivided into various subsections such as organic chemistry, physical chemistry, inorganic chemistry and theoretical chemistry.

- 10 Each of the sections or subsections has an associated keyword which is provided on the computer-readable disc.

 For example, in the organic chemistry section there may be keywords such as alkanes, aromatics and polymers.
- Also provided on the computer-readable disc is a URL address of at least one active server page. In many applications there will be just one active server page URL address. However, in instances where it is a requirement that the computer-readable disc can be used in a variety of locations, e.g. England and Wales, it may be desirable to have more than one active server page, one for each location. The reason for this will be discussed below.
- 25 Preferably, a core data display section can be activated

using an activation point within the core data display.

Preferably, this activation point will be accessible from all sections of the core data display. For example, there may be a header section in the core data display, the header including an activation icon. If there is more than one active server page, there is preferably one activation point corresponding to each active server page.

On activation of a core data display section, the user
will view a links web-page. Preferably, the active server
page and the database are transparent to the user and the
user will not be aware of the process involved in the
direction of the user to the link web-page.

The database is preferably on a remote server. The data base will contain a plurality of peripheral data URL addresses. Associated with each address, is at least one keyword selected from those provided on the computer-readable disc. The keyword(s) assigned to each URL address will, preferably, reflect the subject matter of the web-pages corresponding to each address.

Alternatively, the peripheral data URL addresses may be arranged in sets, each set having associated with it one keyword selected from the keywords recorded on the disc.

On activation of a core data display section, the disc, preferably, sends a keyword to an Active Server Script file on the active server page. This file, preferably contains commands to query the database and search for URL addresses having associated with them the keyword corresponding to the activated section of the core data display. Alternatively, the database is searched for the set of URL addresses corresponding to the desired keyword. Preferably, the file also contains a command to create an HTML file containing links data. Preferably, this HTML page is then viewed by the user as the links web-page.

5

10

Preferably the database, and the URL address provided in

it, are updateable by an operator e.g. an academic

institution. There may be a plurality of operators, each
with their own set of users, and there may be different
databases provided for one or more of the operators.

In especially preferred embodiments, the links web-page does not display the periphery data URL addresses themselves but rather displays headers suggestive of the content of the web-pages bearing the URL addresses.

Preferably, the user will be able to select one of these headers and will then be directed to the URL address of

the selected web-page.

20

25

Preferably the peripheral data displayed on selection of the links data, will be presented in the same format as the core data display so that there is a seamless transfer between the core data display and the peripheral data display. In preferred embodiments, the peripheral data display will include video/audio elements perhaps along with text elements. Preferably, the peripheral data display will contain an element which indicates to the user that they are working on-line so that the user can limit the time and therefore the costs spent working on-line.

Preferably, each time a user transfers to working online, they are immediately asked to log on.

In preferred embodiments, the first time the user uses the teaching tool and activates a core data display section, the user is presented with a registration webpage prior to entering a web-page. The web-page which the user subsequently enters may be a personalised "portal" page which is customised to suit the particular user or group of users or academic institution. When registering, the user is preferably requested to provide

personal/password/e-mail details along with a reference number provided with the computer-readable disc. This prevents access to the peripheral data in cases where the user is not in possession of a teaching tool containing the core data.

5

10

15

20

25

The peripheral data may be data that is likely to be subject to change. As this data is provided on a remote information source, e.g. the Internet and not on the computer-readable disc, it will be possible to update the peripheral data as and when required.

Additionally, it will be possible to amend the URL addresses contained in the database so that new links can be added, obsolete links can be removed and addresses can be amended.

In cases where the computer-readable disc is to be suitable for use in more than one location, e.g. Ireland and Wales, there may be one activation point for each location in the core data display. Each activation point will have associated with it an active server page URL address provided on the computer-readable disc. Each active server page will have associated with it a database of peripheral data URL addresses. In cases

where there are two locations of use, the first location active server page and database will provide links relevant to the first location whilst the second location active server page and database will provide links relevant to the second location. For example, the Scottish server may provide details of Scottish legislation and the Welsh server may provide details of Welsh legislation. The databases may be two separate databases or alternatively, and preferably, the databases used by the first and second active servers are combined 10 in a single database.

By incorporating a different access point for each location in which the disc can be used, it is possible to provide a single disc containing all common core data whilst the peripheral data can be varied according to location.

15

By providing only the active server page address(es) on the computer readable disc, it is possible to ensure than 20 there are no URL addresses on the disc which are out-ofdate, obsolete or no longer appropriate. All of the URL addresses that the user will need to access are contained in the database web-page and therefore, they can be updated, deleted and new addresses can be added.

In especially preferred embodiments, there will be a 'pursuits' icon in the core data display section. On activation of the 'pursuits' icon, the user is preferably directed to an activities web-page. This page may contain coursework for a user to complete, either on line or by printing off the pages and completing them by hand. Preferably, this page also provides the user with a tool for calculating or determining information. For example, the user may be able to input a chemical formula and the teaching tool will provide the appropriate molecular weight value.

5

10

25

Preferably, actuation of the pursuits icon sends a

keyword associated with the section of core data display being viewed by the user upon activation, to the active server. The active server causes the database to be searched and for the appropriate activities web-page URL address to be located. The user is preferably then

transferred directly to the appropriate activities page.

In especially preferred embodiments, the tools and activities tools are maintained on the appropriate webpage so that users can store their work, track progress and share work with other users.

In preferred embodiments, there is also provided in the core data display section a 'group working' icon.

Activation of this icon causes the active server page to retrieve from the database and direct the user to a URL address corresponding to an on-line forum web-page where users can communicate with other users and /or tutors provided by the academic centre. Tutors may create a pass-word protected forum so only users who have received a pass-word can participate.

10

In preferred embodiments, there is also provided in the core data display section a 'test' icon. This provides a means to allow the user to work through a test to review the core data.

15

Activation of the 'test' icon may cause the active server page to retrieve from the database and direct the user to a URL address containing a test paper relevant to the subject matter of the core data display section being viewed by the user on activation of the test icon.

Alternatively and preferably, the test portions of the system are conducted entirely on the disk.

In a second aspect there is provided a method of creating
a teaching tool comprising the steps of:

- i) providing a computer readable disc containing core data that can be viewed as a core data display with a plurality of activatable sections;
- 5 ii) providing on said disc a plurality of keywords,
 each keyword associated with at least one of
 said sections;

10

15

20

- iii) providing at least one URL address of an active
 server page onto said disc, said server being
 accessed on activation of one of said plurality
 of sections;
- iv) providing a database containing a plurality of sets of peripheral data URL addresses, each set associated with at least one of said keywords, said database being searched on access to said active server page; and
- v) providing a links web-page for displaying links data resulting from the search of the database, said links data relating to the set of peripheral data URL addresses associated with the activated core data display section after the search of the database.

In preferred embodiments the computer readable disc is a CD-ROM and the core data, keywords and active server page

URL address are >burned= onto said disc.

10

15

Preferably, the method further includes the step of updating said database. During the updating step, obsolete URL addresses may be removed, new URL addresses may be added and existing URL addresses may be amended.

In especially preferred embodiments, there is provided one URL address for each location in which the disc is to be used. For example, if the disc is to be sent to users in England and Wales, the method will include providing a URL address for a first active server page which will be in communication with a database containing URL addresses to pages relevant to the English user and also providing a second URL address for a second active server page which will be in communication with either the same or a different database containing URL addresses to pages relevant to a Welsh user.

In a third aspect there is provided a teaching tool
enabling a viewer to view core data on a computerreadable disc as a core data display, said core data
display having a first area displaying a plurality of
headings, said headings being selectable such that on
selection, a second area on said core data display

provides at least one section of information relating to said selected heading, said core data display further including a third area including at least one activation icon, such that activation of the icon allows the viewer to view a links web-page, the links web-page displaying links data relating to peripheral data URL addresses, the peripheral data being relevant to the core data in the section of information displayed in said second area when said activation icon is activated.

10

25

5

In preferred embodiments, said core data is stored on a CD-ROM.

The core data is preferably data which is not likely to

15 be subject to change, for example, literary reviews. In

preferred embodiments, the second area displays said core

data as video and/or audio and/or text elements. For

example, the second area may display an audio/visual

lecture delivered by a well-known academic or

20 professional.

In especially preferred embodiment, the core data display further includes a fourth area that displays a video/audio element such as the image and voice of a narrator to guide the user through the data.

Preferably, each section of information displayed in said second area of the core data display has an associated keyword which may or may not be visible to the user.

In preferred embodiments, the third area includes one activation icon for each location in which the teaching tool may be used. In many embodiments, there will be just one activation icon but, for example, if the tool is to be used in England and Wales, there will be two activation icons.

The computer recordable disc is preferably provided with one URL address for each activation icon. Each URL address corresponds to an active server page. On

15 activation of an icon, the user will be directed to a links web-page via the active server page and the database. The database will contain a plurality of peripheral data URL addresses, each associated with at least one keyword. On activation, the active server page communicates with database and the database is searched for URL addresses associated with the keyword corresponding to the section of information displayed in the second area at the point when the icon is activated.

25 Preferably, the links web-page displays links data

corresponding to the peripheral data URL addresses. The links data may be headers providing information outlining the subject matter of the URL addresses.

In preferred embodiments, the third area also includes a 5 pursuits icon and/or a group-working icon. Selection of these icons transfers the user to an appropriate web-page either directly or via the database. The pursuits webpage includes activity pages containing items such as coursework for the user to complete and tools for 10 calculation which the user can use to input their own figures or details, the tools returning the result of the calculation. The group-working web-page allows the user to communicate either on-line or by e-mail with other users and/or tutors. Tutors may create a password-15 protected forum so only students who have received the password (for example either manually or through e-mail) can participate in the forum. Forum topics are preferably stored in a group-working database and any user or tutor may create a new topic at any time. Any 20 user or tutor may read messages relating to a topic in any forum. Messages are preferably stored in a groupworking database. In preferred embodiments, to add a message to a forum, a user or tutor may first "join" that forum e.g. by obtaining a password. Preferably, the 25

names of the members of the forum are stored in the group-working database.

Preferably there is also a test icon which transfers the user to a core data display section containing test material to allow the user to review the core data.

A preferred embodiment will now be described with reference to the accompanying figures in which:

10

Figure 1 is a schematic representation of the teaching tool according to the first aspect of the present invention; and

Figure 2 is a schematic representation of the second aspect of the present invention.

Figure 1 shows a CD-ROM, 1, which is provided with core data and a single URL address corresponding to an active server page, 2. The user will view the core data as a core data display on the screen of a computer, 3.

20

25

15

The core data will be divided and displayed in sections.

The user can move between these sections in any order and each section includes a combination of text/audio/visual elements. Associated with each section is a keyword which is not visible to the user. These

keywords are provided on the CD-ROM, 1.

The core data display also includes a single activation icon, 4, which is visible at all points in the core data display. The user can activate a section by clicking on the activation icon when they are within the section.

When a section having a keyword XXX is activated, an anchor of the type URL?Keyword=XXX is created where URL is the URL address of the active server page, 2, this URL being provided on the CD ROM, 1.

A database, 5, has a plurality of web-page URL addresses and associated with each address is at least one keyword, the keywords being assigned according to the subject matter of the web-page.

On activation of a section of the core data display having a keyword XXX, the active server page, 2, will search the database, 5, for any URL addresses assigned with an XXX keyword.

20

25

15

It will then create a links web-page, 6, displaying the links data corresponding to the URL addresses having the XXX keyword. The user can then select which of the links data is of interest and, on selection of the desired links data, the user is transferred to the appropriate

web-page.

Figure 2 shows a teaching tool which may be incorporated into the teaching tool according to the first aspect of this invention or, alternatively, may be used independently of the first aspect of the present invention.

Figure 2 shows a core data display, 7, having a first area, 8, displaying a plurality of headings, 9. In this 10 embodiment, the headings are >Introduction=, >Information= and >Summary=. Each of these headings is selectable and on selection, a second area, 10, displays core data relevant to the selected heading. The core data displayed in the second are includes text/video and 15 audio presentations and the data may be divided into sections within each heading. Each section of core data has associated with it a keyword that is not visible to the user and the keyword is usually relevant to the subject matter of the core data display section. These 20 keywords are included on a CD-ROM containing the core data.

The teaching tool also includes a third area, 11, in the core data display. This contains a single activation

icon, 4, which allows access to the Internet. This third area, 11, is visible to the user at all time regardless of the display in the second area, 10. The user can activate the icon, usually by clicking on the icon. On activation of the icon, the user is transferred to a links web-page which displays links data relating to peripheral data URL addresses that are relevant to the subject matter displayed in the second area, 10, at the point when the activation icon, 4, is activated.

user to the desired web-page.

This is achieved using an active server page and a database as described for the first aspect. The database includes a plurality of peripheral data URL addresses and each address has associated with it at least one keyword selected from the number of keywords included on the CD-ROM. On activation of the icon, 4, at a point when the section of core data displayed in the second area is XXX causes a link of the type URL?KEYWORD=XXX to be created. The active server page then searches the database for peripheral data URL addresses having an associated keyword of XXX and then creates a links web-page displaying links data relating to the peripheral data URL addresses having the desired keyword. The user can then select one of the links data and this will the direct the

The core data display also includes a fourth area, 12, in which there is an audio/visual element. This comprises an image of and the sound of a talking person. This person gives a narration and guidance through the teaching tool.

The third area also has three further icons. Firstly there is a >pursuits= icon, 13, which, when selected, directs a user to a tools web-page. At the pursuits web-page, the user will be provided with activity pages and tools. Users can use the tools to obtain answers to calculations.

Secondly, there is a >group working= icon, 14, which

transfers the user to a discussion web-page which is
equivalent to an on-line forum. At this web-page, the
user can enter into discussion, for example on-line or by
e-mail with fellow users or with tutors provided by the
academic centre to aid the user and answer any questions.

20

5

10

Finally, there is a >test= icon, 15, which transfers the user to core data display sections having exam scripts which the user can work through to review the core data.

25 The site may feature database driven navigation links.

This will allow the site navigation to be updated automatically as pages are address or removed.

The site may feature database driven content. In place of hard coded HTML text etc. the site may have content linked to a <site content> table in the database via ASP.VB. This allows AN ADMINISTRATOR to change the content of the site pages via a set of password protected online forms on their Control Panel (see below). Each page is allocated a category that becomes the heading in the database driven navigation system (see below).

The site may have the facility for AN ADMINISTRATOR to add/remove pages from the site plus add content to any new pages created. This may be possible via an online form (ControlPanel), see below.

The database driven, personalised "portal" page mentioned previously, may contain specific information from the database about the learner (such as progress through activities), as well as database driven "branding" graphics from their college (linked to the college field in the database) image SRC's are added to this portion of the database.

5

10

15

20

Also linked to the <college name> field in the database are paragraphs of text appropriate to that particular college. This text information can be updated by AN ADMINISTRATOR via an online form (ControlPanel), (see below) and also by colleges themselves who have access to change this data via their own password protected log-in and ControlPanel.

AN ADMINISTRATOR may have the facility to do any or all

of the following via an online ControlPanel (subsequently referred to as a WebUpdate ControlPanel);

- Change content on all general pages of the site
- Change content on areas of the personalised portal page (see above)
- Add/remove pages from the site
 - Allocate more learner numbers to a colleges'
 'account allocation' (see below)
 - Add/remove links in the Links Library (see below)
- This WebUpdate ControlPanel may be fully password protected with AN ADMINISTRATOR allocated the position of <Administrator>.

Colleges may be given their own password protected

ControlPanel for the following;

- Change content on their personalised portal page
- Delete users/learners from their allocated account

College lecturers may be given their own password protected Reporting Section to;

5

15

- View a learner's inputted data and notes on a report page accessed by either selecting learner names from a list or typing in a learner's unique ID number
 - View a report of all learner details
- Add/remove links from their college's Link Library

Access to the web site may be via a CD-ROM that contains one of a plurality e.g. 10 PIN numbers associated with it e.g. printed on the cover. Learners use the PIN number on the CD when logging on to the web site for the first time and creating their account.

AN ADMINISTRATOR may allocate any number of:

- New PIN numbers (for future CD-ROM production)
- Limited number of users per PIN number

 (e.g. if a college is allocated 100 CD-ROMs with PIN number 011011, when user number 101 attempts to access the site, they are declined with a polite refusal message. Should AN ADMINISTRATOR wish to increase the colleges' allocation to 200, this will be allowed via

their WebUpdate ControlPanel.)

5

10

15

20

Colleges themselves have the opportunity to remove users (learners) from the database thus freeing-up user allocations.

The web site may use SessionVariables both to display personalised content and to ease the input of data from on-line forms to the relevant learner tables in the database. Data is collected from the learner during an assignment and the learner has the ability to save 'course notes' in the database.

This functionality may be extended to include an 'Assignment Summary' page where the learner is able to view an online report of their entries to date. If part of the assignment is uncompleted, this report page displays <Activity Incomplete> under the relevant activity heading. The learner may also click a link under the activity heading to return them to the relevant activity page to change/add any data for that activity. This page may be printed for hard copy.

Lecturers from particular colleges will also be able to view learner data as described above for grading

purposes.

The database driven 'links library' may be extended with new functionality that adds <college name> to the table.

The new upgradeable Links Library detects the college name from the Session Variable and the links page will display only links relevant to that particular college.

These embodiments are described by way of example only
and various modification will be apparent to those
skilled in the art.

CLAIMS

5

10

15

- A teaching tool including a computer-readable disc containing core data that can be viewed as a core data display with a plurality of sections, each of said core data display sections having associated with it at least one keyword, said disc further including at least one URL address corresponding to an active server page, the active server page providing communication between said core data display and a links web-page, said teaching tool further including a database in communication with the active server page, said database containing a plurality of peripheral data URL addresses, each peripheral data URL address having associated with it at least one keyword, wherein, on activating one of said core data display sections, a user is directed, by said active server page to said links web-page, said links web-page displaying links data relating to the peripheral data URL addresses having associated the keyword corresponding to keyword associated with the activated core data display section.
 - A tool according to claim 1 wherein the core data display preferably includes an audio and/or a visual element.

20

3. A tool according to claim 1 or claim 2 wherein the core data display is divided into a number of sections and each of the sections has an associated keyword which is provided on the computer-readable disc.

5

- 4. A tool according to any of the above claims wherein provided on the computer-readable disc is a URL address of at least one active server page.
- 10 5. A tool according to any of the above claims wherein on activation of a core data display section, the user will view a links web-page.
- 6. A tool according to any of the above claims wherein
 the database is on a remote server, the data base contains
 a plurality of peripheral data URL addresses and
 associated with each address, is at least one keyword
 selected from those provided on the computer-readable
 disc.

20

25

7. A tool according to any of the above claims wherein on activation of a core data display section, a keyword is sent to an Active Server Script file on the active server page, which file, contains commands to query the database and search for URL addresses having associated

with them the keyword corresponding to the activated section of the core data display.

- 8. A tool according to any of the above claims wherein the links web-page does not display the periphery data URL addresses themselves but instead displays headers suggestive of the content of the web-pages bearing the URL addresses.
- 10 9. A tool according to any of the above claims including a plurality of activation points wherein each activation point has associated with it an active server page URL address provided on the computer-readable disc.
- 10. A method of creating a teaching tool comprising the
 15 steps of:
 - i) providing a computer readable disc containing core data that can be viewed as a core data display with a plurality of activatable sections;
- 20 ii) providing on said disc a plurality of keywords, each keyword associated with at least one of said sections;

25

iii) providing at least one URL address of an active server page onto said disc, said server being accessed on activation of one of said plurality of sections;

- iv) providing a database containing a plurality of sets of peripheral data URL addresses, each set associated with at least one of said keywords, said database being searched on access to said active server page; and
- v) providing a links web-page for displaying links
 data resulting from the search of the database,
 said links data relating to the set of
 peripheral data URL addresses associated with
 the activated core data display section after
 the search of the database.
- 11. A method according to claim 10 further including the step of updating said database, wherein during the updating step, obsolete URL addresses are removed and/or new URL addresses are added and/or existing URL addresses are amended.

20

25

5

12. A teaching tool including means for enabling a viewer to view core data on a computer-readable disc as a core data display, said core data display having a first area displaying a plurality of headings, said headings being selectable such that on selection, a second area on

said core data display provides at least one section of information relating to said selected heading, said core data display further including a third area including at least one activation icon, such that activation of the

icon allows the viewer to view a links web-page, the
links web-page displaying links data relating to
peripheral data URL addresses, the peripheral data being
relevant to the core data in the section of information
displayed in said second area when said activation icon
is activated.

10

- 13. A teaching tool substantially as any one embodiment herein described with reference to the accompanying drawings.
- 15 14. A method of providing a teaching tool, substantially as any one embodiment herein described with reference to the accompanying drawings.